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REPORT ON INSECT CONTROL WORK, SPRING OF 1911 (WHITMAN  
NATIONAL FOREST)

EPHRIAM BARNES  
JULY, 1911

FILE COPY FOREST INSECT LABORATORY,  
STANFORD UNIVERSITY CALIFORNIA

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

WHITMAN NATIONAL FOREST

Report on Insect-Control Work,

Spring of 1911.

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Insect-control work was conducted in cooperation with the Bureau of Entomology, operations beginning April 5, and ending June 30, 1911.

Mr. H. E. Burke, expert in charge of the Branch of Forest Insects, had general charge of all matters of an entomological nature pertaining to the project, Mr. W. D. Edmonston, agent and expert, giving technical advice, field instructions, and instructions as to methods of conducting the work. Special Agent Turner dealt with individual and organized timber owners, planning and assisting in control operations, and securing the right from private owners to conduct control operations on their holdings.

Forest Supervisor of the Whitman National Forest had general supervision over the expenditures incident to the work, purchase of equipment and supplies, establishment of camps, employment of foreman, cruisers and woodsmen, and other matters of importance pertaining to the work.

Deputy Supervisor E. Barnes, assigned to assist the Super-

visor in this work, spent practically all of his time on the work.

The control operations were extended along the east side of the Whitman National Forest within and adjacent to the boundary line, in Townships 6, 7, 8 and 9 S., all of the Deer Creek watershed and portions of the Sumpter and Burnt River watersheds, comprising a total area of 84,330 acres cruised and treated. (See map accompanying report).

Owing to the extremely late spring the work was not begun until April 5, at which time two instruction camps were established, and actual control work was not begun until the latter part of April. New camps were added from time to time and the work pushed forward as rapidly as the weather conditions would permit, and by the first of June there were seven crews of about fifteen men and a cook and one crew of four to five men. Work was done by the eight crews from 23 different camp locations. The moving of a camp occupied from one-half to one day's time and generally required the assistance of two or three men. When a camp was moved but a short distance, five or six miles, the cutting crews after finishing the work at the camp from which they moved walked to the new camp area and continued work.

Garbage holes were dug at each camp, into which

was thrown all refuse. Cleanliness was insisted upon and the men especially warned against throwing refuse into any stream.

The methods of treating the trees and handling the work were similar to the methods used on the insect-control work carried on during the fall of 1910.

The infested portions of the yellow pine timber were peeled and where cut upon National Forest land the tops were lopped and the brush piled in open places ready for burning, and in a few instances the brush was burned. Yellow pine timber cut outside the National Forest was left on the ground, a fire menace, as the trees were trimmed only where it was necessary in peeling. The infested yellow pine trees were found singly and in groups, while the lodgepole was found in clumps.

Experience proved that it was slow, expensive work to peel the lodgepole pine; therefore practically all infested lodgepole pine trees cut were completely burned with the brush, it being found that scorching the bark was hardly sufficient to kill the insects. Stumps were cut 18" or less, except in some cases where the crew foremen were careless about instructing the men. Stumps heavily infested were peeled. All logs and brush was burned together, by first putting the logs in compact piles with a little dry material on the bottom, then the brush on the top and at one end. Two laborers easily

burned the log and brush piles made by twelve to fourteen cutters. No danger was encountered by fires spreading, as there were frequent showers all through June, but care was taken to prevent fires breaking out, and the camps were all supplied with shovels.

Following is the average size of the crews used on this project:

1 foreman  
2 cruisers  
1 cook  
3 crew foremen  
8 woodsmen.

The foremen in charge of the camps were the best obtainable and were all accustomed to woods work. They had charge of the crews engaged in the work, directing them to the marked timber, supervising the work of felling, barking and burning the infested portions of trees and brush disposal. The foremen were required to keep the time of all men working on the project.

The cutting crews, composed of three or four men, including one foreman, cut and barked or cut, piled and burned the infested timber. The foreman of the crew assisted with this work, as well as gathering the required data, giving the date timber was cut, location, species, D. B. H. infested length, middle diameter of infested length, and total height of trees cut.

In some instances it was quite necessary for the

foreman in charge of a camp to assist in marking infested timber so that the crews could continue to cut; in such cases the foremen who did the marking were perfectly competent to do the work.

Where possible all camps were supplied and moved with teams and wagons; otherwise by pack horses. To move a camp of ordinary size required one four-horse team and large wagon, or twelve pack-horse loads. Two camps on this project were supplied and moved entirely by pack outfit, there being no wagon roads in the region.

#### SUMMARY OF CONTROL WORK.

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#### Money Expended by Forest Service.

Provisions.....	\$ 5125.41
Camp and Control Equipment.....	1406.67
Cooks .....	1083.24
Transfer of Camps, etc.....	1199.64
Cruising .....	3114.55
Felling and Treatment of Trees ..	9934.35
Brush piling, burning, etc. (5.74% of total amount expended) ...	1355.18
Salary, Forest Service Represen- tative .....	310.00
Preparation prior to April 1 ....	<u>53.75</u>
 Total Amount Expended.....	 \$23582.79

### Tree Measurements.

(1)

Species.	Number	Aver. D.B.H.	Aver. Diam.	Middle Infest.	Aver. Infest.	Height.
					Length.	
Yellow Pine.....	8015	17.85	14.92		54.10	74.75
Yellow Pine, peeled standing.....	3388	7.05	5.80		6.00	25.00
Lodgepole Pine.....	15170	10.44	9.01		32.00	71.20
Total Trees.....	26573					

(2)

Species.	D. B. H.	Middle	Diam.	infested	Heights	
				Length	Length	Ft. B. M.
Yellow Pine.....	72	6	64	8	126	5 : 134 : 22
Yellow Pine, peeled standing	14	3	12	2	10	4 : 40 : 10
Lodgepole Pine...	36	3	38	2	85	10 : 110 : 30
Total B. F....						: 1,295,960 : 4,210,090

### Average Miles Traveled Per Day.

By Cruisers..... 6 mi.  
By Treatment Crews 2 3/4 mi.

### Locating and Marking.

Total number of men employed.....	22
Time spent on project.....	87 da.
Total number days on project.....	1166.5
Average number men per day.....	13.4
Average cost per man per day.....	\$ 2.67
Average cost per hour, including wages & board.....	.4478
Average cost marking per tree.....	.1580

### Treatment of Trees.

Total number of men employed.....	175
Time spent on project.....	87 da.
Total number days on project.....	4209
Average number men per day.....	56.75
Average cost per man per day.....	2.36
Average cost per tree, including wages & board.....	.519
Actual cost per M. ft. B.M., including wages & board	3.28

### Board.

Cost of board per man per day.....	\$ .9225
Cost of food per man per day.....	.761

### Costs.

Net cost per tree, including depreciation of equipment 20%.....	\$ .8447
Net cost per 1000 ft. B. M., including depreciation of equipment 20%	5.334

### Number of trees by camps per month.

Camp.	Month	Y. Pine	Lp. Pine	Stand.*
Camp #1.	April	405	359	000
(Started	May	521	1420	608
Apr. 5)	June	813	2000	1921
Total		1739	3779	2539
Camp #2.	April	648	000	12
(Started	May	541	882	76
Apr. 5)	June	995	1384	335
Total		2184	2266	423
Camp #3.	April	51	332	000
(Started	May	191	1383	000
Apr. 26)	June	16	2386	000
Total		258	4101	000
Camp #4.	April	85	000	000
(Started	May	249	849	000
Apr. 25)	June	000	1638	000
Total		334	2487	000
Camp #5.	April	155	000	000
(Started	May	987	000	194
Apr. 15)	June	875	906	121
Total		2017	906	316

Camp.	Month	Y. Pine	Lp. Pine	Stand.
Camp #6	May	133	109	000
(St. 5/21)	June	000	1387	000
Total		133	1496	000
Camp #7	June	1046	70	111
(St. 5/24)				
Camp #8	June	314	65	000
(St. 6/16)				

\*Yellow Pine, peeled standing.

"Including 441 trees cut by Baker Forest Protective Association in fall of 1910, but peeled by Forest Service, spring of 1911.

Number Trees Treated by Months.

Month	Y. Pine	Lp. Pine	Stand.
April	1334	691	12
May	2622	4643	878
June	4059	9836	2498
Total	8015	15175	3386

\*Yellow Pine, peeled standing.

Number Trees, Month of April.

Camp.	Tp.	Rge.	Sec.	Area.	Y. Fine	Lp. Pine	Stand.*
Deer Creek, #1	9	37	24	640	21		
			25	640	20		
	9	38	18	160			
			19	570	18		
			20	626	5		
			21	636	4		
			29	628	23		
			30	630	20		
Miners Creek, #1	9	38	26	400	2	175	
			27	480	1	10	
			28	640	32		
			32	639	23		
			33	637	60		
			34	645	73	46	
			35	609	56	128	
	10	38	3	240	39		
			4	80	8		
Anthony Creek, #2	6	37	1	240	35		
			2	160	12		5
	6	38	6	320	55		
			7	640	176		
			18	640	26		
			19	320	9		6
Bulger Flat, #2	7	37	1	400	38		
			12	240	8		
			13	320	15		
	7	38	7	640	140		
			8	640	48		
			9	640	65		
			18	320	23		
Sheep Creek, #3	9	37	15	640		128	
			16	640	22	4	
			21	640	6		
			22	640	20	193	
			23	640	3		
						7	
Union Creek, #4	10	38	11	320	31		
			12	320	23		
			13	320	15		
			14	640	16		
Big Gulch, #5	6	37	36	320	24		
	6	38	29	640	6		
			30	500	12		
			31	640	7		
			32	640	19		

Camp.	Tp.	Rge.	Sec.	Area.	Y.	Pine	Lp.	Pine	Stand.	*
Big Gulch, #5	7	38	5	380	13					
				6	440	9				
Muddy Creek, #6	7	38	32	640	65					

\*Yellow Pine, peeled standing.

Number Trees, Month of May.

Camp.	Tp.	Rge.	Sec.	Area.	Y.	Pine	Lp.	Pine	Stand.	*
Poker Creek, #1	9	39	31	500	33					
	10	38	1	"	8					
	10	39	5	640	5					
			6	400	101		12			
			7	400	20					13
			8	640	71					298
			9	520	32					152
			16	160	2					12
			17	640	98					94
			18	450	19					
			20	320	8					
Elk Creek, #1	9	59	19	640	23			999		
	10	59	4	160	3					3
			5	"	33		86			33
			9	"	7					
	9	59	30	640	25			19		
			32	640	33			111		3
Bulger Flat, #2	7	38	5	320	1					2
			7	640	5					
			18	160	35					
Pine Creek, #2	8	38	21	640	68			8		2
			22	640	5					
			27	640	3					
Marble Creek, #2	9	38	1	320				34		
			12	320	101			730		
			13	320	16			15		
	9	59	7	320	307			95		72
Sheep Creek, #3	9	37	10	640	20			813		
			11	640				140		
			28	640	10					
Snow Ball, #3	9	37	9	160	20			36		
			14	640	5			63		
			22	640	6			53		
			23	640	64			71		
			26	640	27			47		
			27	640	16			160		
			34	200	3					

Camp.	Tp.	Rge.	Sec.	Area.	Y. Pine	Lp. Pine	Stand.
Union Creek, #4		8	37	31	160		399
		9	38	26	60	4	390
				35	640	11	60
	10	38		1	640	50	
				2	640	79	
				3	640	28	
				11	320	58	
				12	320	5	
				13	320	11	
				24	280	23	
No. Powder Riv., #5	7	37	25	320	494		77
	7	38	30	160	82		69
			31	200	18		8
Muddy Creek, #5	7	38	28	640	28		
			29	320	10		3
			30	160	67		
			31	240	74		
			32	640	58		
			33	160	19		
	8	38	5	480	57		9
			6	640	105		28
Slim Creek, #6	9	37	8	320	21	62	
			17	640	80	13	
			18	640	23	30	
			19	50	1	4	
			20	160	8		

\*yellow Pine, peeled standing. "Area elsewhere included.

Number Trees, Month of June.

Camp	Tp.	Rge.	Sec.	Area.	Y. Pine	Lp. Pine	Stand.
Fruit Creek, #1	8	37	30	40		14	
			31	320	1	948	
			32	240	3	425	
Elk Creek, #1	9	37	5	180	2	49	
	9	38	19	"		11	
			26	400	2		147
			27	640	2		
			28	640	37		91
			29	640	175	30	67
			30	"	69	525	
			32	"	32		1
			33	640	38		229
			34	640	158		679
	10	38	4	400	251		560
			5	"			120
							37

Camp.		Tp.	Rge.	Sec.	Area	Y.	Pine	Lp.	Pine	Stand.	*
Marble Creek, #2		9	38	1	320	53	222		60		
				12	320	40	820		6		
				13	320	73	159		27		
		9	39	6	320	14			49		
				7	320	4			7		
Hibbard Gulch, #2		9	38	13	640	264			80		
				24	320	299	183		52		
		9	39	17	480	113				49	
				18	640	131				5	
				19	60	4					
Whiteface, #3		9	37	2	640	1	778				
				3	280	4	308				
Leach & Gurley, #3		9	37	9	90	7	331				
Snowball, #3		9	37	10	"		778				
				11	"		91				
				15	"		88				
				22	"	4	12				
Silver Creek, #4		8	36	26	60		107				
				35	90		457				
				36	640		1074				
No. Powder Riv., #5		7	37	13	320	164			32		
				24	40	18					
				25	200	79			11		
				36	80	177					
		7	38	18	160	4			7		
				19	320	114			25		
				30	320	187			28		
				31	200	132			18		
Cracker Creek, #5		8	37	32	200		82				
				33	480		238				
				34	140		99				
		9	37	4	220		106				
				5	510		381				
Fruit Creek, #6		8	36	25	160		102				
		8	37	19	320		159				
				29	100		116				
				30	600		791				
				31	160		219				
Cold Springs, #7		11	38	10	320	12					
				11	320	24			28		
				12	160	34			39		
				13	640	26			12		
				14	640	81			14		
				15	640	47					
				22	120	16					
				23	640	4					
				24	640	17			18		

Camp.		Tp.	Rge.	Sec.	Area.	Y. Pine	Lp. Pine	Stand.
Cold Springs, #7		11	39	5	320	11		
				6	320	8		
				7	640	23	70	
				8	640	79		
				9	320	10		
				15	160	12		
				16	640	42		
				17	640	17		
				18	640	61		
				19	320	27		
				20	320	35		
				21	320	17		
				22	120	2		
Sumpter, #8		9	36	36	640	2	8	
		9	37	9	160	11	1	
				15	"	17		
				21	80	5	21	
				22	"	10	30	
				23	"	2		
				30	640	38		
				31	320		1	
Sheep Rock, #8		11	38	5	640	33		
				7	480	12		
				8	640	26		
				9	320	20		
				10	80	3		
				12	40	1		
				13	160	9		
				16	160	14		
				17	640	35		
				18	640	7		
				19	640	19		
				21	320	8		
				25	480	9		
				26	640	15		
				27	100	5		
Boundary Cr., #8		9	35½	21	200		3	
				36	640		1	
		10	35½	12	640	10		
				10	640	1		
				14	640	2		

\*Yellow Pine, peeled standing. "Area elsewhere included.

Trees Cut by Baker Forest Protective Association,

Fall of 1910,

Peeled by Forest Service,

Spring of 1911.

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Camp.	Tp.	Rge.	Sec.	Yellow Pine.
Cold Springs, #7	11	38	10	16
			11	46
			12	1
			13	104
			14	66
			15	19
			24	28
	11	39	5	40
			6	19
			7	44
			8	20
			17	7
			18	31

(Signed) Ephraim Barnes

July 24, 1911.

Deputy Supervisor.

Approved:

(Signed) Henry Ireland

Forest Supervisor.